

These Digit-EYES Have It!

A peek at the new digital cameras

By Lynn Wasnak

Imagine that your optic nerve was hooked up to a microprocessor array that translates nerve impulses directly to film...and you could increase the file size and quality to optimize large format production just by staring harder. Now that would be the Ultimate Digital Camera. (Unless you happen to have astigmatism.)

Well, we're not there yet. But new camera backs from major players BETTER LIGHT, LEAF, SINAR and PHASE ONE are bound to get more than a glance from suppliers of large format print-for-pay. Here's why:

QUALITY: High-end, hi-res digital cameras yield a crisp no-film-grain, first-generation image—a better guide for the interpolation required for most large-format jobs than the second-generation image produced by scanners. Direct digital output improves color control, too, eliminating film color bias, batch-to-batch color changes, and film processing variables.

SAVE \$ and TIME: Check digital images immediately—no more costly, time-gobbling process-and-reshoot. Save on film, Polaroids, scanning fees. And if you print in-house, remember: originating the image strengthens workflow control to build your bottom line.

At this stage in technology development, you can't rate apples against apples in digital cameras...each has its own special features and suitability for particular jobs and workflow environments. As you read, keep your particular requirements and these tips in mind:

1. Linear array scanning cameras give the highest resolution—file sizes range into hundreds of megabytes—but require long capture times, bright, steady light (no strobes) and completely stable platforms for optimum scans. No wobbles or flickering lights allowed.
2. Area array CCD cameras may be single-shot (for moving targets) or multi-shot (still photography). Both utilize strobe lighting or continuous light. Multi-shot captures generally gather more color and detail information for superior enlargements. Some are portable, for location shots. The newest technology utilizes a 2" x 3" capture area or larger. (If you see a 2" x 2" on the market, it's older technology.)
3. File size is not the be-all and end-all of large-format production. A smaller file capture with high-quality lighting, exposure, color accuracy, etc. may enlarge better than a bloated, less precise image.

THE BETTER LIGHT MODEL 8000 SCANS FAST

The Model 8000 digital scanning camera back from BETTER LIGHT delivers some of the highest resolution images in the industry, fast: up to 8000 x 10,660 pixels or a 244 MB non-interpolated RGB file in 133 seconds. Lower-res scans take less than a minute, and preview scans, 10 seconds. The 4" x 5" insert fits into any professional view camera, and includes a 4GB internal disk drive for interim storage of captured images. Kodak's trilinear color CCD technology is said to deliver high dynamic range (clean shadows and highlights) with low noise, smooth gradations.

You're not locked into the studio with the Model 8000: Extra-cost portability and panoramic view options are available. Features include continuously adjustable color balance and sensitivity from ISO 50 to ISO 800. Flicker suppression permits use with any continuous light source (tungsten, daylight, HMI or fluorescent.) It's easy to use: 8 selectable image resolutions can be matched to output size requirements, to minimize scan times, while variable cropping permits choice of output image dimensions.

The integral software package (for Apple Power Macintosh computers with minimum 5MB available RAM) presents at-a-glance display of primary camera controls and settings, even on laptop screens. Best news for prospective purchasers: the BETTER LIGHT Model 8000 can be easily upgraded via FLASH memory revisions, or factory-upgraded to higher-performance BETTER LIGHT models in the future. Cost: Basic package including camera insert, cable, control unit, software: \$29,900. Portability option, \$1,195. Panoramic option: \$4,995.

To contact: Calumet Digital Solutions, Hoffman Estates, IL (847) 885-7627 or e-mail: info@calumetdigital.com.

POWERPHASE FX AIDS REPRODUCTION OF FLAT ART

PHASE ONE introduced its scanning wonder, the PowerPhase FX, at Photokina this fall. Designed for flat art reproduction with low depth of field requirement, it boasts the largest capture area (84mm x 100mm) of any existing digital camera. That's 10,500 x 12,600 pixel resolution: a total of 396 million color pixels! The PowerPhase FX mates with your existing 4" x 5" view camera to capture a mind-boggling 380MB uninterpolated file with 24 bit RGB capture (760MB with 48 bit RGB, 1GB with 64 bit CMYK captures). These image files can be offset printed—without interpolation—in sizes up to 34" x 44". You must use top-of-the-line lenses and sufficient light to bring out the beauty in this system, but with the right combination its IEEE 1394 cable lets you capture 240MB+ of fine detail per minute. ISO ranges from 100 to 1600, while 14-bit color depth delivers shadows and highlights that surpass film.

The critical lighting requirements of this digital system are aided by PHASE ONE's Active Power Stabilizing, a new technology that compensates for unstable light caused by variable power supply. It also features Flicker Suppression™ to allow low-wattage lighting.

Image Capture Software for either Apple Power Macintosh or Windows NT gives fast preview, zoom, rotate, and crop mask for composition. Converts images into print-ready CMYK files on the fly. Optional BlueScreen plug-in software offers fully automated image masking on-the-fly, without loss of detail and natural shadows.

Those who purchased a Phase One digital scanning back for large-format after July 1, 1998 can credit the full price toward a new PowerPhase FX if you buy before March 31, 1999. Suggested list price for the Phase One FX is \$33,990 USD. Contact Phase One, 24 Woodbine Ave., Northport, NY 11768. (516) 757-0400. Website: [http:// www.phaseone.com/](http://www.phaseone.com/)

SCITEX LEAF VOLARE: A NEW TWIST IN DIGITAL PHOTOGRAPHY

The LEAF VOLARE™ digital camera back by Scitex is a 3-shot area array color capture camera for color still life and studio photography. It digitizes without scanning, capturing images in an instant with 2048 x 3096 pixels (or 6 million picture elements) arranged in rows and columns, to produce a non-interpolated 36MB direct-digital image. The entire CCD array is exposed, using regular studio strobes, in as little as 1/1000th of a second. It mounts easily on most professional medium- and large-format cameras, interfacing with either an Apple Macintosh computer, or a PC running Microsoft Windows NT.

The VOLARE is a cool LEAF, literally. Its thermo-electric cooling system keeps the CCD at optimum temperature, reducing noise generation. Patented anti-blooming technology subdues highlight flare. Its dynamic range soars: while transparency films like Ektachrome and Fujichrome register 7 f/stops, this camera grabs 11 f/stops—delivering more shadow detail than film. VOLARE digitizes a mighty 14 bits per pixel per color, so original images can be enlarged several hundred percent without degrading. Switching from wide to tall compositions? No problem: LEAF VHTwist technology rotates the entire 6-megapixel CCD head for ideal horizontal/vertical resolution.

The LEAF VOLARE™ also features Live Video Preview (compose, focus and adjust lighting while viewing the computer screen) Live Focus (zoom to reveal focus status of image detail) and Digital Layout (match designer's scene composition via overlay on the LiveVideo screen).

Pricing is \$25,000, capture software included. Colorshop software and board for prepress is \$2,200. Contact: Sinar Bron Imaging, 17 Progress St., Edison NJ 08820. PH (800) 456-0203.

LightPhase is PHASE ONE's new entry in the single-shot digital camera field. Its 2,000 x 3,000 pixel resolution, generates 18 MB RGB files in 8 bits, 36MB in 16 bits, or enough high-quality info to print 8.5" x 11" images without interpolation. Use strobe or continuous lighting, even daylight, to capture images in 1.5 seconds. 33-ft IEEE 1394 cable permits free studio movement. An optional portable battery pack is available for field work. Supports all Hasselblad equipment: mechanical and electronic. Image Capture Software includes CMYK conversions on the fly.

Suggested retail price: \$22,990. Contact Phase One, 24 Woodbine Ave., Northport NY 11768. (516) 757-0400. Website: [http:// www.phaseone.com/](http://www.phaseone.com/)

Versatility is king with Sinar's new offering, the Sinarback digital camera back for one-shot motion or four-shot stills in all types of light. The Sinarback uses improved piezo color capture (a coated CCD) that surpasses the old, artifact-laden variety. In its multi-shot mode, the CCD actually shifts clockwise with each pass—four passes to expose the typical RGB plus an extra color that expands color capture range. Horizontal and vertical shifts ensure accurate color registration, not attainable with earlier piezo technology, from 2048 x 2048 pixels with 14-bit color depth.

Sinarback attaches via adapter to most medium-format cameras (Hasselblad, Mamiya, Fuji, Rollei). For the most complete digital solution, partner the Sinarback with Sinarcam2, a variation

of Sinarcam produced just for this system. The Sinarcam2 omits the filterwheel, but retains all the convenient digital focus and shutter controls of the original Sinarcam, and the largest variety of lens options as well.

For a cost-effective view-camera option, attach the Sinarback to the Sinar f2, which utilizes lenses with between-the-lens electronic shutters. Or for the most adjustable digital view camera in sight, mount the Sinarback/Sinarcam2 combination on a SinarP2 for full range tilt-and-swing, plus lens options from 35mm to over 180mm.

The Sinarback is currently optimized for Apple Power Macintosh. A PC Windows NT version is in development. Pricing: below \$26,868. Sinarcam2: \$7,080. Contact Sinar Bron Imaging, 17 Progress St., Edison NJ 08820. PH (800) 456-0203.